

CRF Errors Corrected by the STIC System Branch

CRF Processing Date: 7/3/95
 Edited by: DC
 Verified by: DC (STIC staff)

Serial Number: 09/954,483A

- ☐ Changed a file from non-ASCII to ASCII
- ☐ Changed the margins in cases where the sequence text was "wrapped" down to the next line.
- ☐ Edited a format error in the Current Application Data section, specifically: **ENTERED**
- ☐ Edited the Current Application Data section with the actual current number. The number inputted by the applicant was ☐ the prior application data; or ☐ other _____
- ☐ Added the mandatory heading and subheadings for "Current Application Data".
- ☐ Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
- ☐ Changed the spelling of a mandatory field (the headings or subheadings), specifically: _____
- ☐ Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: _____
- ☐ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: _____
- ☐ Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
- ☐ Inserted colons after headings/subheadings. Headings edited included: _____
- ☐ Deleted extra, invalid, headings used by an applicant, specifically: _____
- ☒ Deleted: ☒ non-ASCII "garbage" at the beginning/end of files; ☐ secretary initials/filename at end of file; ☐ page numbers throughout text; ☐ other invalid text, such as _____
- ☐ Inserted mandatory headings, specifically: _____
- ☐ Corrected an obvious error in the response, specifically: _____
- ☐ Edited identifiers where upper case is used but lower case is required, or vice versa.
- ☐ Corrected an error in the Number of Sequences field, specifically: _____
- ☐ A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- ☐ Deleted **ending** stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: _____
- ☐ Other: _____

*Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form. 3/1/95



OIPE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/954,483A

DATE: 07/03/2002

TIME: 14:06:56

Input Set : A:\PTO.DC.txt

Output Set: N:\CRF3\07032002\I954483A.raw

4 <110> APPLICANT: Siebel, Christian
5 Brennan, Thomas J.
7 <120> TITLE OF INVENTION: METHODS OF PRODUCING CELLS AND ANIMALS
8 COMPRISING TARGETED GENE MODIFICATIONS AND COMPOSITIONS
9 RELATING THERETO
11 <130> FILE REFERENCE: RMES-02
13 <140> CURRENT APPLICATION NUMBER: US 09/954,483A
C--> 14 <141> CURRENT FILING DATE: 2002-06-10
16 <150> PRIOR APPLICATION NUMBER: US 60/232,957
17 <151> PRIOR FILING DATE: 2000-09-15
19 <160> NUMBER OF SEQ ID NOS: 14
21 <170> SOFTWARE: FastSEQ for Windows Version 4.0
23 <210> SEQ ID NO: 1
24 <211> LENGTH: 108
25 <212> TYPE: DNA
26 <213> ORGANISM: Artificial Sequence
28 <220> FEATURE:
29 <223> OTHER INFORMATION: Targeting Vector
31 <400> SEQUENCE: 1
32 aaggtcctcc cgaggccgg cattctcgca cgcttcaaaa gcgcacgtct gccgcgctgt 60
33 tctcctcttc ctcattctcg ggcctttcga cctgcagcca atatggga 108
35 <210> SEQ ID NO: 2
36 <211> LENGTH: 119
37 <212> TYPE: DNA
38 <213> ORGANISM: Artificial Sequence
40 <220> FEATURE:
41 <223> OTHER INFORMATION: Targeting Vector
43 <400> SEQUENCE: 2
44 aaggtcctat tgtgagcgct cacaatcccg gcattctcgc aagcttcaaa agcgcacgtc 60
45 tgccgcgcta ttgtgagcgc tcacaattcc gggcctttcg acctgcagcc aatatggga 119
47 <210> SEQ ID NO: 3
48 <211> LENGTH: 64
49 <212> TYPE: DNA
50 <213> ORGANISM: Artificial Sequence
52 <220> FEATURE:
53 <223> OTHER INFORMATION: Targeting Vector
56 <400> SEQUENCE: 3
57 gaattcacct gccagaccat gccaaaaaag aagagaaagg tcatgaaacc agtaacgtta 60
58 tacg 64
60 <210> SEQ ID NO: 4
61 <211> LENGTH: 66
62 <212> TYPE: DNA
63 <213> ORGANISM: Artificial Sequence

RAW SEQUENCE LISTING

DATE: 07/03/2002

PATENT APPLICATION: US/09/954,483A

TIME: 14:06:56

Input Set : A:\PTO.DC.txt

Output Set : N:\CRF3\07032002\I954483A.raw

65 <220> FEATURE:
66 <223> OTHER INFORMATION: Primer
68 <400> SEQUENCE: 4
69 cggaattcac ctgccagacc atgccaaaaa agaagagaaa ggcatgaaa ccagtaacgt 60
70 tatacg 66
72 <210> SEQ ID NO: 5
73 <211> LENGTH: 29
74 <212> TYPE: DNA
75 <213> ORGANISM: Artificial Sequence
77 <220> FEATURE:
78 <223> OTHER INFORMATION: Primer
80 <400> SEQUENCE: 5
81 cggaattctc actgcccgct ttccagtcg 29
83 <210> SEQ ID NO: 6
84 <211> LENGTH: 75
85 <212> TYPE: DNA
86 <213> ORGANISM: Artificial Sequence
88 <220> FEATURE:
89 <223> OTHER INFORMATION: Primer
91 <400> SEQUENCE: 6
92 gcattctcgc aagcttcaaa agcgcacgtc tgccgcgcta ttgtgagcgc tcacaattcc 60
93 gggcctttcg acctg 75
95 <210> SEQ ID NO: 7
96 <211> LENGTH: 18
97 <212> TYPE: DNA
98 <213> ORGANISM: Artificial Sequence
100 <220> FEATURE:
101 <223> OTHER INFORMATION: Primer
103 <400> SEQUENCE: 7
104 tcatcaattt ctgcagac 18
106 <210> SEQ ID NO: 8
107 <211> LENGTH: 66
108 <212> TYPE: DNA
109 <213> ORGANISM: Artificial Sequence
111 <220> FEATURE:
112 <223> OTHER INFORMATION: Primer
114 <400> SEQUENCE: 8
115 tgcgcttttg aagcttgoga gaatgccggg attgtgagcg ctcacaatag gaccttcgcg 60
116 cccgcc 66
118 <210> SEQ ID NO: 9
119 <211> LENGTH: 17
120 <212> TYPE: DNA
121 <213> ORGANISM: Artificial Sequence
123 <220> FEATURE:
124 <223> OTHER INFORMATION: Primer
126 <400> SEQUENCE: 9
127 caggaaacag ctatgac 17
129 <210> SEQ ID NO: 10
130 <211> LENGTH: 26

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/954,483A

DATE: 07/03/2002

TIME: 14:06:56

Input Set : A:\PTO.DC.txt

Output Set: N:\CRF3\07032002\I954483A.raw

131 <212> TYPE: DNA
132 <213> ORGANISM: Artificial Sequence
134 <220> FEATURE:
135 <223> OTHER INFORMATION: Silencer Element
137 <400> SEQUENCE: 10
138 cagaggcact ctccgtggtg ctgaaa 26
140 <210> SEQ ID NO: 11
141 <211> LENGTH: 88
142 <212> TYPE: DNA
143 <213> ORGANISM: Artificial Sequence
145 <220> FEATURE:
146 <223> OTHER INFORMATION: Oligonucleotide Primer
148 <400> SEQUENCE: 11
149 agctttttca gcaccacgga gagtgcctct gcttttcagc accacggaga gtgcctctgc 60
150 ttttcagcac cacggagagt gcctctga 88
152 <210> SEQ ID NO: 12
153 <211> LENGTH: 88
154 <212> TYPE: DNA
155 <213> ORGANISM: Artificial Sequence
157 <220> FEATURE:
158 <223> OTHER INFORMATION: Oligonucleotide Primer
160 <400> SEQUENCE: 12
161 agcttcagag gcactctccg tgggtgctgaa aagcagaggc actctccgtg gtgctgaaaa 60
162 gcagaggcac tctccgtggg gctgaaaa 88
164 <210> SEQ ID NO: 13
165 <211> LENGTH: 6148
166 <212> TYPE: DNA
167 <213> ORGANISM: Artificial Sequence
169 <220> FEATURE:
170 <223> OTHER INFORMATION: Construct Sequence
172 <400> SEQUENCE: 13
173 gttaactacg tcagggtggca cttttcgggg aaatgtgcgc ggaacccta tttgtttatt 60
174 tttctaaata cattcaaata tgtatccgct catgagacaa taacctgat aaatgcttca 120
175 ataattattga aaaaggaaga gtatgagtat tcaacatttc cgtgtcgccc ttattccctt 180
176 ttttgcggca ttttgccttc ctgtttttgc tcaccagaa acgctggtga aagtaaaaga 240
177 tgctgaagat cagttgggtg cagcagtggtg ttacatcgaa ctggatctca acagcggtaa 300
178 gatccttgag agttttcgcc ccgaagaacg ttctccaatg atgagcactt ttaaagttct 360
179 gctatgtggc gcggtattat cccgtgttga cgccgggcaa gagcaactcg gtcgccgcat 420
180 aactatttct cagaatgact tggttgagta ctaccagtc acagaaaagc atcttacgga 480
181 tggcatgaca gtaagagaat tatgcagtgc tgccataacc atgagtata aactgcggc 540
182 caacttactt ctgacaacga tcggaggacc gaaggagcta accgcttttt tgcacaacat 600
183 gggggatcat gtaactcgcc ttgatcggtg ggaaccggag ctgaatgaag ccataccaaa 660
184 cgacgagcgt gacaccacga tgccgtgtagc aatggcaaca acgttgcgca aactattaac 720
185 tggcgaaacta ctactctag cttcccggca acaattaata gactggatgg aggcggataa 780
186 agttgcagga ccaactctgc gctcgccct tccggctggc tggtttattg ctgataaatc 840
187 tggagccggt gagcgtgggt ctgcgggtat cattgcagca ctggggccag atggttaagc 900
188 ctcccgatc gtagtattct acacgacggg gagtcaggca actatggatg aacgaaatag 960
189 acagatcgct gagatagggtg cctcactgat taagcattgg taactgtcag accaagttta 1020
190 ctcatatata cttagattg atttaccocg gttgataatc agaaaagccc caaaaacagg 1080

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/954,483A

DATE: 07/03/2002

TIME: 14:06:56

Input Set : A:\PTO.DC.txt

Output Set: N:\CRF3\07032002\I954483A.raw

```
191 aagattgtat aagcaaatat ttaaattgta aacgttaata ttttgtaaata attcgcgtta 1140
192 aatttttgtt aaatcagctc attttttaac caataggccg aaatcggcaa aatcccttat 1200
193 aaatcaaaag aatagcccgga gatagggttg agtggtgttc cagtttgga caagagtcca 1260
194 ctattaaaga acgtggactc caacgtcaaa gggcgaaaaa ccgtctatca gggcgatggc 1320
195 ccactacgtg aaccatcacc caaatcaagt ttttggggt cgaggtgccg taaagcacta 1380
196 aatcgggaacc ctaaaggagag ccccgattt agagcttgac ggggaaagcg aacgtggcga 1440
197 gaaaggaagg gaagaaagcg aaaggagcgg gcgctagggc gctggcaagt gtacgggtca 1500
198 cgctgcgcgt aaccaccaca cccgcgcgcg ttaatgcgcg gctacagggc gcgtaaaagg 1560
199 atctaggtga agatcctttt tgataatctc atgacaaaaa tcccttaacg tgagttttcg 1620
200 ttccactgag cgtcagaccc cgtagaaaag atcaaaggat cttcttgaga tctttttttt 1680
201 ctgcgcgtaa tctgctgctt gcaaacaaaa aaaccaccgc taccagcggg ggtttgtttg 1740
202 ccgatcaag agctaccaac tctttttccg aaggtaactg gcttcagcag agcgcagata 1800
203 ccaaatactg ttcttctagt gtagecgtag ttaggccacc acttcaagaa ctctgtagca 1860
204 ccgcctacat acctgcctct gctaactctg ttaccagtgg ctgctgccag tggcgataag 1920
205 tcgtgtctta ccgggttgga ctcaagacga tagttaccgg ataaggcgca gcggtcgggc 1980
206 tgaacggggg gtctgtgcac acagcccagc ttggagcgaa cgacctacac cgaactgaga 2040
207 tacctacagc gtgagctatg agaaagcgcc acgcttcccg aaggagaaaa ggcggacagg 2100
208 tatccggtaa gcggcagggt cggaacagga gagcgacga gggagcttcc aggggaaac 2160
209 gcctggtatc tttatagtcg tgcgggttt cgccacctc gacttgagcg tcgatttttg 2220
210 tgatgctcgt cagggggggc gagcctatgg aaaaacgcca gcaacgcggc ctttttacgg 2280
211 ttcttggcct tttgctggcc ttttgcctac atgtaatgtg agttagctca ctcataggc 2340
212 accccaggct ttacacttta tgcttcggc tcgtatgttg tgtggaattg tgagcggata 2400
213 acaatttcac acaggaaaca gctatgacca tgattacgcc aagctacgta atacgactca 2460
214 ctaggcggcc gcgagtcgac gaggcgggcc gattatcgac attgattatt gactagttat 2520
215 taatagtaat caattacggg gtcattagtt catagcccat atatggagtt ccgcgttaca 2580
216 taacttacgg taaatggccc gcctggctga ccgcccaacg acccccgccc attgacgtca 2640
217 ataatgacgt atgttcccat agtaacgcca atagggactt tccattgacg tcaatgggag 2700
218 gagtatttac ggtaaactgc ccacttgcca gtacatcaag tgtatcataat gccaaagtaag 2760
219 cccctatttg acgtcaatga cggtaaattg cccgcctggc attatgccc gtacatgacc 2820
220 ttacgggact ttctacttg gcagtacatc tacgtattag tcatcgctat taccatgggt 2880
221 cgaggtgagc cccacgttct gcttcaactc ccccatctcc ccccccctcc ccccccaat 2940
222 tttgtattta tttatttttt aattattttg tgcagcgatg ggggcggggg gggggggggc 3000
223 gcgcgcaggg cggggcgggg cggggcgagg ggcggggcgg ggcgagggcg agaggtgcgg 3060
224 cggcagccaa tcagagcggc gcgctccgaa agtttccttt tatggcgagg cggcgggcgg 3120
225 ggcggcccta taaaaagcga agcgcgcggc gggcgggagt cgcgtcggtg ccttcgcccc 3180
226 gtgccccgct ccgcgcgcgc tcgcgcgcgc cgccccggct ctgactgacc gcgttactcc 3240
227 cacagggtgag cgggcgggac ggcccttctc ctccgggctg taattagcgc ttggtttaat 3300
228 gacggctcgt ttcttttctg tggtgcgtg aaagcettaa agggctccgg gagggccctt 3360
229 tgtgcggggg ggagcggctc ggggggtgcg tgcgtgtgtg tgtgcgtggg gagcgcgcgg 3420
230 tgccggccgc gctgccgggc ggcgtgtgag gctgcggggc cggcgcgggg ctttgtgcgc 3480
231 tccgcgtgtg cgcgagggga gcgcggccgg ggcggtgcc ccgcggtgcg ggggggctgc 3540
232 gaggggaaca aaggctcgt gcggggtgtg tgcgtggggg ggtgagcagg ggggtgtggc 3600
233 gcggcggtcg ggcgtgaacc cccccctgca cccccctccc cgagttgctg agcacggccc 3660
234 ggcttcgggt gcgggctcc gtgcggggcg tggcgcggg ctcgcgcgtg cgggcggggg 3720
235 gtggcggcag tgggggtgc cgggcggggc cgggcccgcct cgggcggggg agggctcggg 3780
236 ggaggggcgc ggcgccccc gagcgccggc ggcgtgcgag gcgcggcgag ccgcagccat 3840
237 tgccctttat ggtaatcgtg cgagagggcg cagggaactc ctttgtccca aatctggcgg 3900
238 agccgaaatc tgggagggcg ccgcgcaccc cctctagcgg gcgcggggcg agcgggtgcg 3960
239 cgcggcgagg aaggaaatgg gcggggaggg ccttcgtgcg tcgcgcgcgc gccgtcccct 4020
```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/954,483A

DATE: 07/03/2002

TIME: 14:06:56

Input Set : A:\PTO.DC.txt

Output Set: N:\CRF3\07032002\I954483A.raw

```
240 tctccatctc cagcctcggg gctgccgcag ggggacggct gccttcgggg gggacggggc 4080
241 agggcggggt tcggcttctg gcgtgtgacc ggcggctcta gagcctctgc taaccatgtt 4140
242 catgccttct tcttttctct acagctcctg ggcaacgtgc tggttgttgt gctgtctcat 4200
243 cattttggca aagaattcac ctgccagacc atgccaaaaa agaagagaaa ggatcatgaaa 4260
244 ccagtaacgt tatacagatg cgcagagtat gccggtgtct ctatcagac cgtttccgcg 4320
245 gtggtgaacc aggccagcca cgtttctgcg aaaaacgctg aaaaagtggg agcggcgatg 4380
246 gggagctga attacattcc caaccgcgtg gcacaacaac tggcgggcaa acagtgcgtt 4440
247 ctgattggcg ttgccacctc cagtctggcc ctgcacgcgc cgtcgcaaat tgtcgcggcg 4500
248 attaaatctc gcgcgatca actgggtgcc agcgtggtgg tgcgatggg agaacgaagc 4560
249 ggcgtcgaag cctgtaaagc ggcggtgcac aatcttctcg cgcaacgcgt cagtgggctg 4620
250 atcattaact atcgcgtgga tgaccaggat gccattgctg tggaaagctg ctgcactaat 4680
251 gttccggcgt tatttcttga tgtctctgac cagacacca tcaacagtat tattttctcc 4740
252 catgaagacg gtacgcgact gggcgtggag catctggtcg cattgggtca ccagcaaatc 4800
253 gcgctgttag cgggccattt aagttctgtc tcggcgcgtc tgcgtctggc tggctggcat 4860
254 aaatatctca ctgcgaatca aattcagccg atagcggaac gggaaaggca ctggagtggc 4920
255 atgtccggtt ttcaacaaac catgcaaatg ctgaatgagg gcacgttcc cactgcgatg 4980
256 ctggttgcca acgatcagat ggcgctgggc gcaatgcgcg ccattaccga gtccgggctg 5040
257 cgcgttggtg cggatatctc ggtagtggga tacgacgata ccgaagacag ctcatgttat 5100
258 atccgcgct caaccacat caaacaggat ttctgcctgc tggggcaaac cagcgtggac 5160
259 cgttgctgc aactctctca gggccaggcg gtgaaggcca atcagctgtt gccctctca 5220
260 ctggtgaaaa gaaaaaccac cctggcgccc aatacgcaaa ccgcctctcc ccgcgctt 5280
261 gccgattcat taatgcagct ggcacgacag gtttcccgac tggaaagcgg gcagtgaaga 5340
262 ttcaactctc aggtgcaggc tgccatcag aaggtggtgg ctggtgtggc caatgccctg 5400
263 gctcacaat accactgaga tcttttctcc tctgccaaa attatgggga catcatgaag 5460
264 ccccttgagc atctgacttc tggctaataa aggaaattta ttttcattgc aatagtgtgt 5520
265 tggaaatttt tgtgtctctc actcggaagg acatatggga gggcaaatca tttaaaacat 5580
266 cagaatgagt atttggttta gattttggca acatatgcca tatgctggct gccatgaaca 5640
267 aaggtggcta taaagaggtc atcagtatat gaaacagccc cctgctgtcc attccttatt 5700
268 ccatgaaaaa gccttgactt gaggttagat ttttttata ttttgtttg tgttattttt 5760
269 ttctttaaca tccctaaaat tttccttaca tgttttacta gccagatttt tctcctctc 5820
270 ctgactactc ccagtcatag ctgtccctct tctcttatga agatccctcg acctgcagcc 5880
271 cagcccaagc tcggggccag gtcggccgag cgatcgcgag aattcggtt aagtgaagtc 5940
272 tattaacgac tggcgcgtct tttacaacgt cgtgactggg aaaaccctgg cgttacccaa 6000
273 cttaatcgcc ttgcagcaca tcccccttcc gccagctggc gtaatagcga agaggccgcg 6060
274 accgatcgcc ctcccaaca gttgcgcagc ctgaatggcg aatggcgctt cgcttggtaa 6120
275 taaagccgcg ttcggcgggc tttttttt 6148
```

277 <210> SEQ ID NO: 14

278 <211> LENGTH: 5100

279 <212> TYPE: DNA

280 <213> ORGANISM: Artificial Sequence

282 <220> FEATURE:

283 <223> OTHER INFORMATION: Construct Sequence

285 <400> SEQUENCE: 14

```
286 ggcggcgcga gtgcagcagg ccggccgatt aattaaggct cgacattgat tattgactag 60
287 ttattaatag taatcaatta cggggtcatt agttcatagc ccatatatgg agttccgcgt 120
288 tacataactt acggtaaatg gccgcctgg ctgaccgccc aacgaccccc gccattgac 180
289 gtcaataatg acgtatgttc ccatagtaac gccaataggg actttccatt gacgtcaatg 240
290 ggaggagtat ttacggtaaa ctgccactt ggcagtacat caagtgtatc atatgccaag 300
291 tacgccccct attgacgtca atgacggtaa atggcccgcc tggcattatg ccagttacat 360
```

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/954,483A

DATE: 07/03/2002

TIME: 14:06:57

Input Set : A:\PTO.DC.txt

Output Set: N:\CRF3\07032002\I954483A.raw

L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date



Does Not Comply OIPE
Corrected Sequence Needed

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/954,483A

DATE: 06/17/2002
TIME: 13:48:27

Input Set : A:\PTO.VSK.txt
Output Set: N:\CRF3\06172002\I954483A.raw

4 <110> APPLICANT: Siebel, Christian
5 Brennan, Thomas J.
7 <120> TITLE OF INVENTION: METHODS OF PRODUCING CELLS AND ANIMALS
8 COMPRISING TARGETED GENE MODIFICATIONS AND COMPOSITIONS
9 RELATING THERETO
11 <130> FILE REFERENCE: RMES-02
13 <140> CURRENT APPLICATION NUMBER: US 09/954,483A
C--> 14 <141> CURRENT FILING DATE: 2002-06-10
16 <150> PRIOR APPLICATION NUMBER: US 60/232,957
17 <151> PRIOR FILING DATE: 2000-09-15
19 <160> NUMBER OF SEQ ID NOS: 14
21 <170> SOFTWARE: FastSEQ for Windows Version 4.0

ERRORED SEQUENCES

277 <210> SEQ ID NO: 14
278 <211> LENGTH: 5100
279 <212> TYPE: DNA
280 <213> ORGANISM: Artificial Sequence
282 <220> FEATURE:
283 <223> OTHER INFORMATION: Construct Sequence
285 <400> SEQUENCE: 14
286 gcggccgcga gtcgacgagg ccggccgatt aattaaggct cgacattgat tattgactag 60
287 ttattaatag taatcaatta cgggggcatt agttcatagc ccatatatgg agttccgcgt 120
288 tacataactt acggtaaatg gccgcctgg ctgaccgccc aacgaccccc gccattgac 180
289 gtcaataatg acgtatgttc ccatagtaac gccaataggg actttccatt gacgtcaatg 240
290 ggaggagtat ttacggtaaa ctgccactt ggcagtacat caagtgtatc atatgccaa 300
291 tacgccccct attgacgtca atgacggtaa atggcccgcc tggcattatg ccagtagcat 360
292 gaccttacgg gactttccta cttggcagta catctacgta ttagtcatcg ctattaccat 420
293 ggttcgaggt gagccccacg ttctgttca ctctcccat ccccccccc tccccacccc 480
294 caattttgta tttatttatt ttttaattat tttgtgcagc gatggggggc gggggggggg 540
295 gggcgcgcg caggcggggc ggggcggggc gaggggcggg gcggggcgag gcggagaggt 600
296 gcggcggcag ccaatcagag cggcgcgctc cgaaagtttc cttttatggc gaggcggcgg 660
297 cggcgggcgg cctataaaaa gcgaagcgcg cggcgggcgg gagtcgctgc gttgccttcg 720
298 ccccggtgcc cgcctcgcgc cgcctcgcgc cgcgcgcgc ggctctgact gaccgcgtta 780
299 ctcccacagg tgagcggggc ggacggccct tctctccgg gctgtaatta gcgcttggtt 840
300 taatgacggc tcgtttcttt tctgtggtg cgtgaaagcc ttaaagggtt ccgggagggc 900
301 cctttgtgcg ggggggagcg gctcgggggg tgcgtgcgtg tgtgtgtgcg tggggagcgc 960
302 cgcgtgcggc ccgcgtgcc cggcggtgtg gacgcgtgcg gcgcggcgcg ggggctttgt 1020
303 gcgcctccgc tgtgcgcgag gggagcgcg cggggggcgg tgcccccgcg tgcggggggg 1080
304 ctgcgagggg aacaaaggct gcgtgcgggg tgtgtgcgtg ggggggtgag caggggggtg 1140
305 gggcgcgggc gtcgggctgt aacccccccc tgcaccccc gccccgagtt gctgagcacg 1200

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/954,483A

DATE: 06/17/2002

TIME: 13:48:27

Input Set : A:\PTO.VSK.txt

Output Set: N:\CRF3\06172002\I954483A.raw

```

306 gcccggttc ggggtgcggg ctccgtgcgg ggcgtggcgc ggggctcgcc gtgcggggcg 1260
307 gggggtggcg gcaggtgggg gtgcggggcg gggcggggcc gcctcgggcc ggggagggct 1320
308 cgggggaggg gcgcggcgcc cccggagcgc cggcggtgt cgaggcgcg cgagccgcag 1380
309 ccattgcctt ttatggtaat cgtgcgagag ggcgcaggga ctctcttgt cccaaatctg 1440
310 gcggagccga aatctgggag gcgcgcgcgc accccctcta gcgggcgcgg gcgaagcggg 1500
311 gcgggcgcgg caggaaggaa atgggcgggg agggccttcg tgcgtcgccg cgccgcgcgc 1560
312 cccttctcca tctccagcct cggggctgcc gcagggggac ggcgtgcctc gggggggagc 1620
313 gggcagggcg ggggttcggc tctggcgtgt gaccggcgcc tctagagcct ctgctaacca 1680
314 tgttcatgcc ttctctttt tctacagct cctgggcaac gtgctggttg ttgtgctgtc 1740
315 tcatcatttt ggcaagaat tgcaccat ggtgagcaag ggcgaggagc tggtcacccg 1800
316 ggtggtgccc atcctggtcg agctggacgg cgacgtaaac ggcacaaagt tcagcgtgtc 1860
317 cggcgagggc gagggcgatg ccacctacgg caagctgacc ctgaagtcca tctgcaccac 1920
318 cggcaagctg cccgtgcctt ggcccacct cgtgaccacc ctgacctacg gcgtgcagtg 1980
319 ctccagcgcc taccgcgacc acatgaagca gcaagacttc ttcaagtcg ccatgcccga 2040
320 aggtacgtc caggagcgca ccatcttctt caaggacgac ggcaactaca agaccgcgc 2100
321 cgaggtgaag ttcgagggcg acacctggt gaaccgcac gagctgaagg gcatcgactt 2160
322 caaggaggac ggcaacatcc tggggcaca gctggagtac aactacaaca gccacaacgt 2220
323 ctatatacat gccgacaagc agaagaacgg catcaagggt aactcaaga tccgccacaa 2280
324 categaggac ggcagcgtgc agctcgccga ccaactacc cagaacaccc ccatcggcga 2340
325 cggccccgtg ctgctgccc acaaccacta cctgagcacc cagtcgcgcc tgagcaaaag 2400
326 ccccaacgag aagcgcgatc acatggtcct gctggagttc gtgaccgcgg ccgggatcac 2460
327 tctcgcatg gacgagctgt acaagtaaga attcactcct cagggtgcagg ctgcctatca 2520
328 gaaggtggtg gctggtgtgg ccaatgcctt ggtcacaaa taccactgag atcttttcc 2580
329 ctctgcaaaa aattatgggg acatcatgaa gcccttgag catctgactt ctggctaata 2640
330 aaggaaatct attttcattg caatagtgtg ttggaatctt ttgtgtctct cactcggaag 2700
331 gacatatggg agggcaaatc atttaaaaca tcagaatgag tatttggttt agagtttggc 2760
332 aacatatgcc atatgctggc tgccatgaac aaaggtggct ataaagaggt catcagtata 2820
333 tgaaacagcc cctgctgtgc catctcttat tccatagaaa agccttgact tgaggttaga 2880
334 ttttttttat attttgtttt gtgtttttt tttctttaac atccctaaaa tttccttac 2940
335 atgttttact agccagattt ttctctctct cctgactact cccagtcata gctgtccctc 3000
336 ttctcttatg aagatccctc gacctgcagc ccaagctcgg ggcaggtcg gccgagcgat 3060
337 cgcgagaatt cggcttaagt gagtctatt acggactggc cgtcgtttta caacgtcgtg 3120
338 actgggaaaa cctggcggtt acccaactta atcgcccttc agcacatccc ccttcgccca 3180
339 gctggcgtaa tagcgaagag gcccgaccgc atcgcccttc ccaacagttg cgcagcctga 3240
340 atggcgaaat gcgcttcgct tggtataaaa gcccgcttcg gcgggctttt ttttggttaa 3300
341 ctacgtcagg tggcactttt cggggaaatg tgcgcggaac cctattttgt ttatttttct 3360
342 aaatacatcc aaatatgtat ccgtcatga gacaataacc ctgataaatg cttcaataat 3420
343 attgaaaaag gaagagtatg agtattcaac atttccgtgt cgcctttatt ccttttttgg 3480
344 cggcattttg ccttctgtt tttgctcacc cagaaaacgt ggtgaaagta aaagatgctg 3540
345 aagatcagtt ggggtgcacga gtgggttaca tcgaactgga tctcaacagc ggtaagatcc 3600
346 ttgagagttt tcgccccgaa gaacgttctc caatgatgag cactttttaa gttctgctat 3660
347 gtggcgcggt attatccgct gttgacgcgg gcgaagagca actcggtcgc cgcatacact 3720
348 attctcagaa tgacttggtt gagtactcac cagtcacaga aaagcatctt acggatggca 3780
349 tgacagtaag agaattatgc agtgcgtcca taacctgag tgataacact gcggccaact 3840
350 tacttctgac aacgatcgga ggaccgaagg agctaaccgc ttttttgac aacatggggg 3900
351 atcatgtaac tcgcttgat cgttggaac cggagctgaa tgaagccata ccaaacgacg 3960
352 agcgtgacac cagatgcct gtacaaatg caacaacggt gcgcaacta ttaactggcg 4020
353 aactacttac tctagcttcc cggcaacaat taatagactg gatggaggcg gataaagttg 4080
354 caggaccact tctgcgctcg gcccttcgg ctggctggtt tattgctgat aaatctggag 4140

```

RAW SEQUENCE LISTING

DATE: 06/17/2002

PATENT APPLICATION: US/09/954,483A

TIME: 13:48:27

Input Set : A:\PTO.VSK.txt

Output Set: N:\CRF3\06172002\I954483A.raw

```

355 cccgtgagcg tgggtctcgc ggtatcattg cagcactggg gccagatggt aagccctccc 4200
356 gtatcgtagt tatctacacg acggggagtc aggcaactat ggatgaacga aatagacaga 4260
357 tcgctgagat aggtgcctca ctgattaagc attggtaact gtcagaccaa gtttactcat 4320
358 atatacttta gattgattta ccccggttga taatcagaaa agcccccata acaggaagat 4380
359 tgtataagca aatattttaa ttgtaaacgt taatattttg ttaaaattcg cgttaaattt 4440
360 ttgttaaate agctcatttt ttaaccaata ggccgaaatc ggcaaaatcc cttataaate 4500
361 aaaagaatag cccgagatag ggttgagtgt tgttccagtt tggaacaaga gtccactatt 4560
362 aaagaacgtg gactccaacg tcaaagggcg aaaaaccgtc tatcagggcg atggcccact 4620
363 acgtgaacca tcacccaaat caagtttttt ggggtcgagg tgccgtaaag cactaaatcg 4680
364 gaaccctaaa gggagcccc gatttagagc ttgacgggga aagcgaaacg ggcgagaaag 4740
365 gaaggggaaga aagcgaaagg agcgggcgct agggcgctgg caagtgtagc ggtcacgctg 4800
366 cgcgtaacca ccagcaccgc cgcgcttaat gcgcgcgtac agggcgcgta aaaggatcta 4860
367 ggtgaagatc ctttttgata atctcatgac caaaatccct taacgtgagt tttcgttcca 4920
368 ctgagcgta gaccccgtag aaaagatcaa aggatcttct tgagatcctt tttttctgcg 4980
369 cgtaatctgc tgettgcata caaaaaaacc accgctacca gcggtggttt gtttgccgga 5040
370 tcaagagcta ccaactcttt ttccgaaggt aactggcttc agcagagcgc agataccaaa 5100

```

E--> 372(7)

E--> 375(1) -delete

VERIFICATION SUMMARY

DATE: 06/17/2002

PATENT APPLICATION: US/09/954,483A

TIME: 13:48:28

Input Set : A:\PTO.VSK.txt

Output Set: N:\CRF3\06172002\I954483A.raw

L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:372 M:254 E: No. of Bases conflict, this line has no nucleotides.

M:254 Repeated in SeqNo=14